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EXAMINER
JANAKIRAMAN, NITHYA

ART UNIT	PAPER NUMBER
2123	

NOTIFICATION DATE	DELIVERY MODE
02/25/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 November 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-11,13,14,16 and 17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-11,13,14,16 and 17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>19 September 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This action is in response to the submission filed on 11/27/2007. Claims 1-11, 13-14, and 16-17

are presented for examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims

under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to

the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a later invention was

made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35

U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. The prior art used for these rejections is as follows:

  a. Birsan et al., U.S. Patent 7,131,066. (**"Birsan"**).

  b. Le Hégaret et al., "What is the Document Object Model?". Nov. 13, 2000. Available at

  http://www.w3.org/TR/DOM-Level-2-Core/introduction.html. (**"Le Hégaret"**).

4. The claim rejections are hereby summarized for Applicant's convenience. The detailed

rejections follow.

5. **Claim 1-11, 13-14, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Birsan in view of Le Hégaret.

6. In regards to Claim 1, Birsan expressly teaches the following claimed limitations:

> *1. A computer-implemented method to process a document, comprising:*
> *analyzing features of a document; and*

Birsan expressly teaches that "[T]he system provides the capability to navigate a source

data model and extract specific data from the source data model to a target data model." (See

Birsan, especially: col.2, lines 48-50).

Birsan expressly teaches the processing of a document by analyzing features of a

document in column 3, lines 5-15: a template processing module processes the directive to

manipulate selected data in the source data model. The template processing module then

generates a DOM tree.

Birsan also expressly teaches the generation of a single domain model as a function of

the analyzed features (See especially col.4, lines 61-64, which teach that "As described above,

the source data model (i.e. domain model 16 in Fig.1) contains read-only data that the mechanism

10 can extract and use to generate a formatted output (i.e. the target data model 18).").

Birsan also expressly teaches "manipulation of the DOM tree for the domain model."

(See col.2, line 47). Birsan also teaches that "the mechanism 10 utilizes a 'tree' navigation

scheme to perform transformations in the source data model 16 (and the target data model 18)."

(See col.8, lines 37-40). Birsan teaches "storing" a single domain model (See col. 13, lines 35),

structuring the stored domain model to be searchable by a querying system (See col. 5, line 46 to

col. 6 line 10. For querying system see "targetscope" directive.) and retrieving the domain model

(col. 8, lines 37-44, "navigates the root node for the data model", the model would have to be

retrieved to navigate it).

However, Birsan does not expressly teach the previous limitations for a *set* of domain

models.

Le Hégaret, on the other hand, does expressly teach a set of domain models, in this case a

"forest" of DOM trees (See p.2 of Le Hégaret):

In the DOM, documents have a logical structure which is very much like a tree; to be more
precise, which is like a "forest" or "grove", which can contain more than one tree. Each
document contains zero or one doctype nodes, one root element node, and zero or more
comments or processing instructions; the root element serves as the root of the element tree for
the document. However, the DOM does not specify that documents must be implemented as a
tree or a grove, nor does it specify how the relationships among objects be implemented. The
DOM is a logical model that may be implemented in any convenient manner. In this
specification, we use the term structure model to describe the tree-like representation of a
document. We also use the term "tree" when referring to the arrangement of those information
items which can be reached by using "tree-walking" methods; (this does not include attributes).

Birsan and Le Hégaret are analogous art because they are from the same field of

endeavor of XML document management.

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to modify the teachings of Birsan with those of Le Hégaret so as to generate a set of

domain models ("trees") for a single document. The suggestion/motivation for combining the

references would have been Le Hégaret's teaching in the text cited above that "In the DOM,

documents have a logical structure ... which can contain more than one tree."

Therefore, it would have been obvious to a person of ordinary skill in the art to modify

Birsan with Le Hégaret to obtain the invention specified in Claim 1, to include the storing,

structuring, and retrieving a *set* of models.

7. In regards to Claim 2, Birsan expressly teaches the following:

> *2. The method of claim 1, wherein a domain model relates to a simple type, or a complex type, and:*
> *if a property for a domain model is of the simple type, populating the domain model with a value according to the document being represented; and*
> *if a respective property type for a domain model is of the complex type, selectively adding another domain model as the value for that property, according to the document being represented.*

(See Birsan, especially: col.10, lines 16-27)

8. In regards to Claim 3, Birsan teaches the following limitations:

> *3. The method of claim 1 further comprising:*
> *searching the set of domain models to determine a subset of features of the document that match search criteria.*

(See Birsan, especially: col.8, lines 37-44)

9. In regards to Claim 4, Birsan teaches the following limitations:

> *4. The method of claim 2, comprising:*
> *analyzing the set of domain models by determining values of properties from at least one model.*

(See Birsan, especially: col.2, line 41 to col.3 line 41)

10. In regards to Claim 5, Birsan teaches the following limitations:

> *5. The method of claim 1, comprising:*
> *describing the document as instances of the respective models of the set.*

(See Birsan, especially: col.4, line 61 to col.5, line 6)

11. In regards to Claim 6, Birsan teaches the following limitations:

6. The method of claim 1 comprising:
setting values in at least one of the models that represent supplemental information not in
the document but is associated to the document.

(See Birsan, especially: col.9, lines 8-11, See "template file".)

12. In regards to Claim 7, Birsan teaches the following limitations:
7. The method of claim 2, comprising:
an automated process where a list of conditions must be met in the document to populate a
property with a value or set of values.

(See Birsan, especially: col.5, lines 7-45. See "updatetargetscope directive".)

13. In regards to Claim 8, Birsan teaches the following limitations:

8. The method of claim 1, wherein the analyzed features of the document comprises keywords.
(See Birsan, especially: col.5, line 46 to col.6, line 10. See "targetscope" directive.)

14. In regards to Claim 9, Birsan teaches the following limitations:

9. A computer-implemented method to facilitate locating a document, comprising:
receiving a query related to locating the document; and searching across a plurality of domain
models that respectively represent a plurality of documents; and identifying a set of the domain
models that match criteria of the receive query.

(See Birsan, especially: col.5, line 46 to col.6, line 10. See "targetscope" directive.)

15. Claims 10-11 are rejected based on the same reasoning as claim 1. Claims 10-11 are

system and medium claims that recite limitations equivalent to those recited in method

claim 1 and taught throughout Birsan.

(See Birsan, especially: col.5, line 46 to col.6, line 10. See "targetscope" directive.)

16. In regards to Claim 13,

13. (Previously Presented) The method of claim 1, comprising representing portions of the documents with respective instances of a subset of the generated domain models.

This claim is rejected on the same grounds as claim 1.

17. In regards to Claim 14, Birsan teaches the following limitations:

14. (Previously Presented) The method of claim 13, wherein the respective instances are computation ready representations of the portions of the documents that can be understood by a plurality of computer applications.

(See Birsan, especially: col.1, line 32 to col.2, line 37)

18. In regards to Claim 16,

16. (Previously Presented) The method of claim 1, wherein a hierarchy of domain models are generated as a function of respective analyzed features.

This claim is rejected on the same grounds as claim 1.

19. In regards to Claim 17, Birsan teaches the following limitations:

17. (Previously Presented) The method of claim 9, comprising searching across the domain models in connection with locating a collection of documents.

Examiner finds that that use of plural documents constitutes a mere duplication of the parts. Birsan's teachings, which apply to one document, can be extended to many documents.

Response to Arguments- 35 U.S.C §103

20. Applicant's arguments filed 11/27/2007 have been fully considered but they are not

persuasive.

Argument 1:

21. Applicant argues on page 6, lines 8, that Birsan is silent with respect to generating a set of domain models that represent a particular document.

22. Birsan expressly teaches the generation of a domain model. (See especially col.4, lines 61-64, which teach that "As described above, the source data model (i.e. domain model 16 in Fig.l) contains read-only data that the mechanism 10 can extract and use to generate a formatted output (i.e. the target data model 18).") Birsan also expressly teaches "manipulation of the DOM tree for the domain model." (See col.2, line 47). Birsan also teaches that "the mechanism 10 utilizes a 'tree' navigation scheme to perform transformations in the source data model 16 (and the target data model 18)." (See col.8, lines 37-40). However, Birsan does not expressly teach the generation of a set of domain models. Le Hégaret, on the other hand, does expressly teach the use of a set of domain models, in this case a "forest" of DOM trees (See p.2 of Le Hégaret). Rejection maintained.

Argument 2:

23. Applicant argues on page 6, lines 9-10, that Birsan fails to teach storing the generated models with other models representing other documents.

24. Birsan teach the storing of models in column 13, lines 9-39, for example, "the teachings herein stored in the computer(s)". Rejection maintained.

Argument 3:

25. Applicant argues on page 6, lines 10-11, that Birsan fails to teach a query and retrieval system that provide a collection of domain models in response to a query.

26. Birsan teaches this in column 5, line 46 to column 6, line 10, specifically the "target scope directive". In addition, column 8, lines 37-44 state "the mechanism first navigates the root node for the data model", thus the model would have to be retrieved to be navigated. Rejection maintained.

Argument 4:

27. Applicant argues on page 6, lines 11-12 that Birsan fails to disclose or suggest analyzing the properties of the set of domain models retrieved for further analysis.

28. Column 2, lines 53-67 state that the read-only data is extracted as used to generate the target data model. Through the provision of a set of "structure walking directives" and a set of basic "string formatting" directives, a user can write a procedural sequence of instructions to quickly extract data from a XML source data model and format the extracted data into a desired stream for a target data model. In this way, the data is analyzed. Rejection maintained.

Argument 5:

29. Applicant argues on page 6 that Le Hégaret does not teach the process of claim 1.

30. Examiner was not relying upon Le Hégaret to teach the entire process of claim 1, rather the usage of a set of domain models, which is shown in page 2 as a "forest" of DOM trees. Rejection maintained.

Argument 6:

31. Applicant argues on page 7 that Le Hégaret does not teach retrieving a collection of domain

models in response to a search performed on the document for further analysis for specific

properties.

32. Examiner was not relying on Le Hégaret for this teaching, rather column 8, lines 37-44 of

Birsan: "...navigates the root node for the data model". Rejection maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to NITHYA JANAKIRAMAN whose telephone number is

(571)270-1003. The examiner can normally be reached on Monday-Thursday, 8:00am-5:00pm,

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Paul Rodriguez can be reached on (571)272-3753. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

                                        Nithya Janakiraman
                                        Art Unit 2123
                                        February 15, 2008

NJ

                        /Paul L Rodriguez/
                        Supervisory Patent Examiner, Art Unit 2123